

THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (previously presented): A surface-treated plastic slide comprising a plastic slide and a coating on the plastic slide for immobilizing thereon proteins, peptides or small molecules, wherein said coating comprises a polyfunctional aldehyde coupled to said plastic slide, a compound providing at least one NH₂ group which is coupled to said polyfunctional aldehyde, and a polyfunctional epoxide compound comprising at least one epoxy group for coupling to said NH₂ group and at least one epoxy group for coupling to said proteins, peptides or small molecules.

Claim 2 (original): The surface-treated plastic slide as claimed in claim 1, wherein the plastic slide is formed of a material, which is a polycarbonate, or a homopolymer or copolymer that is made of one or more monomers selected from the group consisting of ethylene, haloethylene, propylene, halopropylene, acrylate, methacrylate, butadiene, acrylonitrile, norbornene and styrene.

Claim 3 (previously presented): The surface-treated plastic slide as claimed in claim 2, wherein the plastic slide is formed of a polymer of styrene.

Claim 4 (original): The surface-treated plastic slide as claimed in claim 1, wherein the plastic slide has at least one cavity chamber.

Claim 5 (currently amended): The surface-treated plastic slide as claimed in claim 4, wherein the plastic slide has two cavity chambers having the same or different depth ranging from 0.03 mm to 0.5 mm.

Claim 6 (canceled)

Claim 7 (previously presented): The surface-treated plastic slide as claimed in claim 1, wherein the polyfunctional aldehyde is glutaldehyde.

Claim 8 (previously presented): The surface-treated plastic slide as claimed in claim 1, wherein the compound providing at least one NH₂ group is NH₄OH.

Claims 9-11 (canceled)

Claim 12 (previously presented): The surface-treated plastic slide as claimed in claim 1, wherein the epoxy group(s) for coupling to said proteins, peptides or small molecules can react with their free hydroxyl, sulfhydryl or amino groups.

Claim 13 (previously presented): The surface-treated plastic slide as claimed in claim 1, wherein the polyfunctional epoxide compound contains a long chemical chain of 6 to 24 carbon atoms.

Claim 14 (original): The surface-treated plastic slide as claimed in claim 1, wherein the proteins, peptides or small molecules are homogeneous or heterogeneous.

Claim 15 (canceled)

Claim 16 (previously presented): The surface-treated polystyrene slide comprising a polystyrene slide and a coating on the polystyrene slide for immobilizing thereon oligonucleotides or polynucleotides, wherein the coating is formed by applying to said polystyrene slide a NH₄⁺ group-free buffer containing a positive charges-providing polymer at an alkaline condition.

Claim 17 (original): The surface-treated polystyrene slide as claimed in claim 16, wherein the positive charges-providing polymer is polylysine.

Claim 18 (original): The surface-treated polystyrene slide as claimed in claim 16, wherein the NH₄⁺ group-free buffer is selected from the group consisting of a carbonate, phosphate and citrate buffer.

Claim 19 (original): The surface-treated polystyrene slide as claimed in claim 16, wherein the alkaline condition is in the range of pH 9 to 11.

Claim 20 (previously presented): The surface-treated polystyrene slide as claimed in claim 16, wherein the polystyrene slide has at least one cavity chamber.

Claim 21 (previously presented): The surface-treated polystyrene slide as claimed in claim 20, wherein the polystyrene slide has two cavity chambers having the same or different depth ranging from 0.03 mm to 0.5 mm.